AN

INTRODUCTORY LECTURE

DELIVERED IN THE

GRANT MEDICAL COLLEGE AT BOMBAY,

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BY

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PREFACE.

In a late Report I explained the system of clinical instruction and examination which has always been followed in the Grant Medical College. I was induced to enter upon these details from a conviction that the clinical department of instruction was in general very defective in medical schools, and that the importance of clinical and practical examination had been almost altogether overlooked by examining Boards in the United Kingdom and elsewhere. I ventured, moreover, to offer some general remarks on medical education and the medical profession. I expressed my belief, that though a thoroughly efficient system of clinical instruction and of practical test examination would do much towards elevating the character of the profession, and inculcating rational and steady principles of practice, yet more was required,—that attentive observation and persevering research, throughout the whole course of professional life, were essential to the formation of an effective profession of medicine. I suggested that it was owing to the prevalence of this spirit that the high character of a part of the medical profession in the United Kingdom was due, in spite of the defects of the systems of

medical education, and the unquestionable inadequacy of the test examinations.

The present Lecture was written very shortly after the Report to which allusion has just been made, and advantage was taken of the opportunity to inculcate the same principles, and to apply them to the students and graduates of our Indian medical colleges, and to the prospective state of the profession of medicine among the Natives of India.

An attempt is made in the early part of the Lecture to give the junior students some idea of the nature of the profession of medicine, and of the means by which ability to exercise it may be best acquired. It is then inquired whether the Institution to which they have resorted for their professional training is possessed or not of adequate means of instruction. Particular emphasis is laid on the clinical department of the school, and a regret expressed that the students, hitherto, have not in general fully availed themselves of the advantages at their command. A transition from the profession of medicine as it ought to be, to a notice of partial and exclusive systems—as Hydropathy and Homœopathy—is naturally made; and an explanation is given of the relation which these partial systems of practice bear to a general and scientific one. The argument which I have followed seems to me the simple and true one, is open, I believe, to the comprehension of ordinary intelligence, and is altogether opposed to that unfortunate spirit of antagonism which has too frequently characterised the writings of professional men on these subjects.

Having discussed the question of collegiate education, the Lecture next directs attention to the other condition essential to the existence of a high-toned and effective profession of medicine, viz. honest and persevering study throughout the whole course of professional life. The opinion is then distinctly stated, that as yet there has been no evidence given of the dawning of this spirit among the graduates of the Indian medical colleges. A still further statement is hazarded, that this want of after self-improvement is not confined to the Indian students of medicine, but is equally evinced by Indian students generally. The evil of this defect is pointed out, and the belief is distinctly avowed, that so long as that course of self-discipline of maturer years, by which the educated classes of other countries alone hope to attain honour and distinction, is neglected by the college-educated classes of the Natives of India, it is vain for them to expect to enter the arena of active life in competition with the ripe intelligence of the educated classes of European countries.

In conclusion, I would remark, that a repetition of statements and arguments tedious to the English reader will be observed. This, however, could not well be avoided in addressing young students in a language which is foreign to them. For this, and other defects of style, it is, therefore, unnecessary that any further explanation should be offered.

C. M.

Bombay, July 1853.

LECTURE.

Events important to this College have taken place since I last addressed you—three years ago—on the occasion of the opening of a Session. Of those who then occupied your places, several have received the diploma of the College, and are now engaged in the active exercise of their profession. We have, therefore, now in this part of India not only a Native medical College, but a Native medical profession also; and it is, in consequence, expedient that I should on this occasion endeavour to take a more extended and connected view of the subject of medical education and its objects than has as yet been advisable from this place. In the observations, then, which I am about to submit for your consideration, I shall not confine myself to the means of imparting a knowledge of medical science and art, but extend my remarks to the practice of the medical profession also. By following this course, I shall have the opportunity of addressing myself with advantage, not only to those who are commencing their medical studies this day, but also to those who are about to enter on, or have already entered on, the exercise of the profession; and I shall further avail myself of this opportunity, by enlarging upon some topics relating to the profession of medicine respecting which there is much popular error.

In arranging my observations, I shall first endeavour to explain to you why it seems reasonable to conclude that a profession of medicine—that is the practice of an art of healing—may be expected always to exist in all states of society. Having assumed the necessity of a profession of medicine, I shall next inquire what are the most likely means of training individuals to the most efficient and safe exercise of this profession; and then show

you that those which have been adopted in this College are well suited for the object in view. Having explained to you that a profession of medicine is necessary,—is in fact a condition of human nature,—and having pointed out to you the best means of training individuals for its exercise, I shall next endeavour to make intelligible to you the relation which hydropathy, homœopathy, mesmerism, and other partial and unscientific systems of the art of healing, bear to that scientific and general one which you are to be taught here, and which, as graduates of this College, you will be required to practise.

After completing my observations on collegiate medical education, and on the relation subsisting between a general and scientific system of practice and partial and unscientific ones, I shall next consider whether, in order to the formation of an efficient profession of medicine, more than mere collegiate education is necessary or not. We shall find that much more is required ; that other conditions besides instruction in Colleges are necessary to form a skilful practitioner of medicine ; and it will be then for us to inquire whether there is as yet any tendency in India to the development of those other conditions requisite to the existence of an efficient profession of medicine.

To proceed with our subject. From all that we know of the history of man, it may be very safely affirmed, that in all the degrees and states of civilization in which we can conceive man to be placed, he will always be found to be more or less liable to accidents and disease. From these he experiences pain and inconvenience—becomes more or less unfitted for his duties, and has his duration of life more or less shortened. It is a part of the constitution of the mind of man, in its rudest as well as in its highest state of intellectual and moral development, to seek relief from suffering when experienced by himself, and to endeavour to administer relief to others who may be suffering around him. It is the object of the profession of medicine to minister to this characteristic of man's nature ; and it is as certain a consequence of his mental affections, as efforts to appease hunger and allay thirst are of his physical condition. In all our ideas of associations of men in their various natural and

social relations, this sympathy of man for man—this endeavour to remove or alleviate pain—must occupy a prominent place. It cannot be doubted, then, that in all states of society there must exist a profession of medicine of one kind or other. In those states in which the mind of man is as yet rude and uncultivated, all his actions must bear the impress of the mental condition which has dictated them, and his healing art must necessarily be imperfect—it may be useless or injurious. But as the mind of man expands, and becomes stored with knowledge, all his actions bear the impress of his advancing mind ; and his healing art becomes the application of this increased knowledge or science—becomes more useful, and is less likely to be injurious.

Let us, then, assume with confidence, that a profession of medicine is a necessary consequence of the constitution of the mind of man, in the circumstances in which he is usually placed ; and let us next proceed to determine the means by which man may best fit himself to exercise this profession, *i.e.* let us determine the kinds of knowledge or science, the application of which will best enable man to relieve the sufferings of his fellows ; also the manner in which this knowledge, and the skill to apply it, may be best acquired.

A very limited amount of observation is sufficient to teach us that the body of man is of very complex structure ; that it consists of various and very numerous parts, which are placed in a certain fixed order and relation to each other ; that these parts, during the life of man, are undergoing constant changes, and are engaged in constant and varied actions. It is, indeed, the presence of these changes and actions that constitutes the state to which we apply the term *life*. When these changes and actions are going on, the man is alive ; when they have ceased, the man is dead. Let us now continue our observations, and we shall further learn that the changes and actions whose presence constitutes the living state of the body do not depend altogether on a certain fitness of the structures of the body, but in part, also—as essential conditions—on the atmospheric air by which man is surrounded, on the food which he eats, and the water which he drinks. Pursue our inquiries further, and then we become

aware that when the bodily structures are in a certain state, the atmospheric air in a certain condition, and food and water supplied of certain quantity and quality, and when the mind of man is in a certain state, then the changes and actions of his body go on regularly and harmoniously, after that particular manner which constitutes the state we term *health*.

Let us still prosecute our investigation, and we shall find that the structures of the body of man are, from alterations which they undergo, liable to become unfitted for their actions. They may be divided, torn, broken, bruised, shaken by mechanical forces; they may be injured by fire, by the electric force, by chemical agents. When the structures are thus altered, the actions in which they are usually engaged will either cease to be performed, or will be carried on in a manner different from that which we call health. They will be deranged—the state which we term *disease* will be present. Or the atmospheric air by which man is surrounded may be of unsuitable constitution: it may want the due proportion of oxygen; it may contain too much carbonic acid; it may have mixed with it the sulphuretted hydrogen, the ammonia, or other emanations that proceed from decaying animal and vegetable matters; or it may contain, as is believed, foreign constituents still more subtle, and which chemistry has as yet failed to separate and distinguish; or it may be of a temperature too high or too low. The water which man drinks may be impure. The food which he uses may be supplied in too much or too little quantity, or of improper quality, or not sufficiently varied. When we have the atmospheric air, the food, the water, in states different from those which induce the harmonious changes and actions of health, then alterations in the actions of the structures of the body take place. To these altered actions we apply the term disease,—not caused in the present instance by unfitness of the structures themselves, but by unsuitableness of those other conditions which in certain states are as essential to healthy action as a certain condition of structure is.

Let us still continue our observation of man, and we cannot fail to notice that intimate relation which subsists between his immaterial mind and his bodily structure with its actions.

Certain mental states conduee to healthy actions of the body. We know that adequatc employment of mind, thc state of eheerfulness and hope, lead to appetite for food, sound digestion, a calmly-beating heart, and refreshing sleep ; and these are actions of health. But how changed may these actions become when thc mind is harassed with eare or anxiety, or agitated with anger or fear. Where then is the appetite for food, the sound digestion, the calmly-beating heart, or the refreshing sleep ? The youngest of you here must, I am sure, from his own experience, have had ample confirmation of the close relation that subsists between the aetions of the body and states of the mind.

Our inquiry, then, has reached this point, that health depends on eertain conditions of bodily strueture, and of those ageneies —air, food, water—which exeite the different aetions in which the struetures are engaged during life ; also on certain mental states. That from altered states of strueture, or conditions of air, food, water, or of states of mind, derangement of aetion—disease—is produced.

It is the object of the profession of medicine to prevent and to remove disease ; and we have now to determine how we may hope to best qualify ourselves for thc exercise of this profession.

We must first make ourselves acquainted with the different parts of the eomplex structure of the human body,—with their appearance, their position, their relations to eaeh other, and the nature of their intimate textures ; and when we are thus engaged, we are studying *human anatomy*. This can only be done satisfactorily and efficiently in one way—that is, by earefully observing these facts with our own senses in thc dead body. We must, therefore, ourselves frequently and earefully dissect the human body. In this pursuit we shall be mueh assisted by the excellent written descriptions of former anatomists. Their writings will guide and facilitate our observation, and fix our attention upon all that is important ; but they can never be a substitute for observation by our own senses. We can never hope to be anatomists,—*i.e.* we can never expect to be acquainted with the structure of thc human body,—unless we ourselves frequently and attentively dissect and examine its

different parts. You have been already told that the structures of the body are, during life, constantly undergoing changes, and are engaged in actions of different kinds,—that, in fact, this being so constitutes the state of life. You have also been told that the body is not enough, but that conditions of atmosphere and of food are also essential to the carrying on of these actions. Having become acquainted with the structures of the body, we have next to acquire a knowledge of the changes and actions of health, and of the states of atmosphere, the kinds of food, and the mental affections, which excite and maintain them. While we are acquiring this knowledge in respect of man, we are studying *human physiology*. We endeavour to obtain this information by acquainting ourselves with the observations and experiments of intelligent men, as recorded in books, and above all by the use of our own senses in all practicable instances. But the body, you have been told, may have its structures altered, its actions deranged; and it is the object of the profession of medicine to correct these, and bring them back to the healthy state. We are now, then, supposed to be familiar with all that pertains to natural structure and healthy action, and in continuing that course of training which is to qualify us for the profession of medicine we have next to observe and examine carefully and frequently structures, divided, broken, bruised by mechanical or other forces, or altered in other ways; also the varied deranged states of action of the different parts of the body; to become familiar with the phenomena which indicate these, and note in what respects they differ from the phenomena which indicate healthy action. Further, we must inquire into the altered conditions of the atmosphere, of food or water, or mental states, which may have induced the deranged actions before us. While we are engaged in these studies, we are acquiring a knowledge—

1*st*, of *morbid anatomy*—that is, altered structure.

2*nd*, of *pathology*—that is, of altered states of the changes and actions of the body.

3*rd*, of the *causes* of disease—that is, altered states of those agencies—atmosphere, food, water, mind—which in certain states excite to healthy action.

We must study *anatomy* and *physiology* in the dissecting room and the museum, aided by the careful and attentive perusal of books, and the guidance of our teachers. But where are we to study *morbid anatomy*, *pathology*, and the *causes* of disease? This can only be done where large numbers of diseased people are collected together,—in other words, in a large, well-arranged hospital. We must at the very bedside of the sick observe their bruised, and broken, and altered structures, and the phenomena which mark deranged action of different parts of the body; and we must there try to find out what mechanical or other forces have led to the alteration of structure, or what varied condition of atmosphere, of food, of water, of mind, have induced the deranged actions.

When engaged with these pursuits, we shall very soon become satisfied that there will be no real progress made by us without patient, and attentive, and repeated observation. Unless our observation be of this kind, the phenomena we seek to become cognizant of will, in a great many instances, fail to make any impression on our minds. They do not rudely knock against the organs of sense,—their impression is only recognized when the senses are in relation with an *attentive* mind.

But we do not study *morbid anatomy*, *pathology*, and the *causes* of disease from curiosity merely. Our object in becoming familiar with these deranged states is that we may be enabled, in future instances, to prevent their occurrence, and that we may learn how to correct and remove them when actually present. 1*st*, as regards the prevention of disease. A knowledge of the causes of disease—*i. e.* of the states of atmosphere, of food, of mind, which induce deranged actions—will teach us to enjoin those who may wish to escape from similar derangements, to avoid those atmospheric and other states.

Then, in regard to the restoration of altered structures, and the correction of deranged actions, let us recollect that physiology teaches us the conditions of structure, of air, food, mind, which are necessary to the maintenance of healthy action; and when we reflect on the nature of these actions, we shall soon become satisfied that it is a fair inference, that in order to bring deranged

actions back to the state of health, we ought first to endeavour to determine in what respect the circumstances of the subject of deranged action have differed from those which are usually attended with healthy action, and then place the sufferer from deranged action, in respect to atmosphere, food, and mind, in those states which are usually associated with health. We shall find, that by attention to this alone deranged action will in many instances be brought back to the healthy state.

If a limb be bruised, or broken, or divided by a cutting instrument, we know that these altered states of structure can only be recovered from after time has been given to the actions of the injured and adjoining parts to perform the work of restoration. With this view, we must place the parts in the circumstances most favorable for healthy action. We must stop all undue effusion of blood, remove all foreign bodies that may have become imbedded in the structures. We restore parts that may have been displaced, as nearly as practicable, to their natural positions, and gently keep them there. We place the limb in the position in which the repose of the parts will be most complete. If the internal parts be exposed from division of the skin, which physiology teaches us has for one of its offices to protect the parts underneath, then we substitute the protection of plasters, bandages, or other similar simple appliances. If the temperature of the injured and adjoining parts be above the standard of health, we reduce it by the application of external cold. In simple arrangements such as these consists the true surgery of many important injuries. The surgeon does nothing but so manage that the natural actions of the injured and neighbouring parts shall have their freest play—shall be as little interfered with as possible. He allows time for their operation, and patiently waits for the result. But the surgeon cannot act thus unless he be a good anatomist and physiologist, and he will not act thus unless he be acquainted with the fact that altered structures are mainly restored to their natural state by attention to those circumstances under which their healthy actions are best performed, and by allowing time for their performance. A person who is ignorant of these facts, and yet pretends to practise the art of

surgery, is always meddlesome, and does harm; and when recovery takes place, is prone to attribute that result which is due to time and to nature to his own, not unfrequently injurious appliances. The ready credulity with which pretensions of this kind are received by the non-professional is a familiar fact.

Bear these statements in your mind, and also recollect that the healthy actions of the body depend on certain states of atmosphere, of food, of mind; and when they are deranged, we place the individual in those conditions of atmosphere, food, and mind which best conduce to healthy action; and we often find that by this course alone the derangement is removed.

We must now proceed a step further in our inquiry; but, before doing so, let us clearly understand the point to which we have reached.

We assume that a healing art, or profession of medicine, is a necessary condition of all societies, and that it must be the aim of intelligent societies to render this profession as efficient and useful as possible. In order to effect this, we believe that an acquaintance with the following kinds of knowledge or science is essential:—1*st*, of the structure of the human body; 2*nd*, of its healthy actions and changes, and of the states of external agencies which induce these; 3*rd*, of the alterations which the structure and the actions of the body may undergo.

We do not aim at acquiring all this knowledge of the human body from curiosity alone; we do so with the object of maintaining in the body a natural state of structure, and a healthy state of its actions, and of qualifying ourselves to correct derangement when it exists; and we find that we may, to some degree, gain both these objects by taking care that the body is, as far as practicable, exposed to the influence *only* of those states of atmosphere, food, and mind which we know are essential to its healthy action. And now the question presents itself to our minds—Are the means which we possess of curing disease—that is, of bringing back deranged action to the state of health—confined to maintaining that condition of atmosphere, food, and mind which favours healthy action, or have we other means at our command also? We have other means; and it is the consideration of these

that must next occupy our attention. When we still continue our inquiries into the actions of the human body, we find that there exist in nature many material objects which are capable of influencing and modifying in different ways one or other of the many actions in which structures are engaged ; and it is a fair inference from this fact that some of these material objects, applied to the body when some of its actions are deranged, may so modify and influence these actions as to favour their return to health. Now this inference has been fully proved to be correct from extensive observation and experiment ; and *we*, therefore, who have to practise the profession of medicine in its most effective manner, are required to turn this knowledge to account, and avail ourselves of the assistance of these material objects, to which the terms medicines or articles of the materia medica are usually given. The study, then, of the various properties of these bodies, and of their individual influences on the actions of the system in health and disease, constitutes an important part of your medical education—it is the study of *materia medica*, *pharmacy*, and *therapeutics*.

We acquire a knowledge of the physical and chemical properties of the articles of the materia medica from the descriptions in books, and from the observation of the objects themselves, aided by the lectures of teachers. *Pharmacy*, that is, the best mode of preparing and combining the articles of the materia medica for best exercising their influence on the human body, we study in the laboratory. The phenomena which attend their influence on the human body in deranged states, a knowledge of which is designated *therapeutics*, must be studied in the hospital, on the persons of the sick who are actually under the influence of these agencies.

It appears, then, that much of our training for the medical profession must be conducted within the walls of an hospital : it is there only that we can become acquainted with altered states of structure, and with deranged actions ; that we can understand the influence exercised upon deranged action by attention to the conditions which usually favour healthy action, and those other important influences, also, which are caused by articles of the

materia medica. This course of study is designated the *clinical study of disease, i.e.* study, at the bedside of the sick, from actual observation, of all the sensible phenomena which attend deranged action, and the means used for their correction. In order to qualify ourselves for preventing and curing disease, that is for the practical exercise of the profession of medicine, we must study *anatomy, physiology, morbid anatomy, pathology,* the *causes of disease, materia medica, pharmacy, therapeutics;* and we have learnt that *morbid anatomy, pathology,* the *causes of disease,* and *therapeutics* can only be acquired by personal, frequent, and attentive observation of the sick, while undergoing treatment for disease.

But the prospectus of the course of study shows that you have also to make yourselves acquainted with the science of *chemistry;* and why is this? It is the object of chemistry to teach us all that is known of the intimate composition of all material objects. We cannot understand the intimate composition of the structures of the body, or the changes they undergo in health and disease,—of the composition of the atmospheric air, of the various articles of food, and of the materia medica,—without a general knowledge of the principles and facts of chemistry. The reason, then, is obvious, why we must master this science at the very outset of our medical education.

Having, then, I trust, by this time satisfied you in respect to the kind of knowledge we ought to possess in order to fit ourselves for the profession of medicine, I have next to inquire whether this College is well adapted for communicating it? Our dissecting room, museum, laboratory, library, and professors, supply all that is necessary for instruction in anatomy, physiology, chemistry, and materia medica. The adjoining hospital, with the system of clinical instruction that has been organized in it, gives us facilities and opportunities of becoming acquainted with the phenomena of disease, and the actions of remedies, to an extent, I believe, unequalled in any other existing school. They are so because the numbers and varieties of disease are ample, and the number of students is small; and much pains have always been taken to extract as much instruction

as is practicable from our favorable circumstances. Of the superiority of the clinical system in this College I feel myself entitled to speak with confidence. I have lately had an opportunity of comparing it with those of the medical colleges of Bengal and Madras; and by reading and conversation I have endeavoured to make myself acquainted with the systems in force elsewhere. The Government, then, has provided complete and excellent means of medical education for the Natives of this Presidency; and now the question very naturally suggests itself—Have they availed themselves fully of these means—have the students of this College generally turned to good account the excellent opportunities which they unquestionably enjoy of becoming skilful practitioners of medicine? Seven years' experience here entitles me to answer the question with confidence. I reply with regret, but without hesitation, that the students generally have not fully availed themselves of the means of instruction which this College affords. Their great defects are want of steady attention, whence results an imperfect observation of phenomena submitted to their senses, whence ill-defined impressions on the mind, and imperfect reasoning. The result of all this is that much of our ample means are lost, much of the teacher's labour thrown away; and the benefits conferred on the country are no greater than they would be had Government supplied imperfect means of instruction, but the community more intelligent and attentive students. This is a serious evil—this lavishing of advantages upon those who will not profit by them; but the remedy is not with the Government, nor with the Professors of the College, but with you, the students; and it behoves you to set about it. It is true that a strict and complete system of examination is enforced, and that the diploma of the College is only given to those who are really fitted to enter on the practice of medicine with safety to the community; yet any one who witnesses these examinations, and is at the same time familiar with the system of instruction, cannot fail to be convinced that there is a great disproportion between the results and the opportunities.

Let us now pass to other subjects with which I proposed to engage your attention. The kinds of knowledge required to be

possessed by those who practise the profession of medicine in its most complete and effective form have been explained, and the means most appropriate for acquiring them have also been dwelt upon. You have been told that we must be familiar with the structures and actions of the human body, healthy and deranged: that when the actions are deranged, we endeavour to correct them, to bring them back to the state of health, by taking care that those conditions of the atmosphere, of food, water, and mind, which cause healthy action, are present. We also endeavour to correct deranged action by the use of articles of the *materia medica*, *i. e.* material objects capable of influencing the actions of the system in various ways. I wish you clearly to bear in mind these two distinct means which we possess of curing disease, and to recollect that the most *effective* and *complete art of healing* consists of the use of both these means by intelligent men, familiar with all the known facts relating to these means, as well as all the known facts of the structures and actions of the body on which these means are intended to operate.

Now the amount of disease and suffering in all communities is great, and the demand for its cure and alleviation must also necessarily be great. The minds of those affected with disease are generally weak from physical suffering. The minds of surrounding friends become agitated from sympathy and anxiety. Both become desponding and credulous, and prone to be influenced by the confident pretensions of ignorance and dishonesty. Hence there spring up many partial modes of treating disease, which are dignified with the name of *system*, and which acquire a passing notoriety, partly from the confidence with which those pretensions are advocated, partly from educated professional men unwisely placing themselves in a position of antagonism to them, and chiefly because the unprofessional public, who constitute themselves judges in the matter, are from ignorance of the subject altogether incompetent to do so. Hydropathy, homœopathy, mesmerism, and others also which might be named, are systems of this kind. It requires, however, but a slight acquaintance with these to satisfy ourselves that they are not in fact *antagonistic* to the profession of medicine, as practised

in its most complete and effective form. They are, in truth, merely parts of it magnified into the importance of the whole. That this is true can, I think, be easily made intelligible to you.

We have already found, that among our means of curing disease we give an important place to attention to the atmospheric air, food, water, states of mind—that by this alone diseases are often recovered from. Now what is the treatment of disease, by hydropathy, homœopathy, and mesmerism, but varied and modified ways of exercising *this part* of the profession of medicine? That it is so in respect to hydropathy is very apparent. The establishments are placed in a pure country air, with walks and other occupations to exercise the body and engage the mind, previously relieved from the harrassing engagements of life. The food is plain, of easy digestion, and well adapted for nourishing the body. The water is pure, and is used internally and externally in those ways that conduce to the healthy actions of the system. When we regard homœopathy, we find the same attention paid to food, and we have also the adoption of means calculated to inspire the mind with confidence and hope ; and if there be anything really curative in mesmerism, it is, I believe, through the influence of the mind on the body. That diseases are cured by hydropathy and homœopathy, and allied systems of treatment, is an unquestionable truth ; but they are so simply because these systems are modes of carrying out that principle of controlling deranged action which ought always to constitute an important part of an effective profession of medicine, and which is quite familiar to professional men,—I mean attention to purity of atmospheric air, suitableness of food, appropriate internal and external use of water, and the maintenance of the mind in a cheerful and hopeful state :—under these influences deranged actions always tend to return to the state of health, and very often nothing further is necessary to ensure this result.

The cures, then, effected by hydropathy and homœopathy are in accordance with an acknowledged principle of treatment. Do we object to the cure of disease on this principle? By no

means. A profession of medicine is not effective in which it is not distinctly recognized, and fully applied. Then what is the objection to hydropathy, homœopathy, and other allied systems? They are partial and exclusive; they do not fairly state their case, nor confine their operations to the limits within which they are efficacious and safe. The hydropathist has various means of using water externally which are not merely of doubtful efficacy, but are often injurious. The homœopathist excites confidence and hope, by the exhibition, either in ignorance or dishonesty, of particles of matter so minute as to be necessarily inert. Moreover, as systems of medical practice they are objectionable, because they deprive the sick and suffering of that aid which is undoubtedly to be derived from the skilful use of *articles* of the *materia medica:* thus many diseases, from neglect of the proper means, would remain uncured.

It would seem, then, from the statements which have just been made to you, that the curative power of the systems of hydropathy and homœopathy is truly consequent upon the application of principles acknowledged by medical men, and of which, in the exercise of their profession, they ought fully to avail themselves. But a complete system of medicine has a curative power in addition—that derived from the articles of the materia medica. And now the question very naturally arises—How is it that partial systems, as hydropathy and homœopathy, ever find acceptance in preference to that more complete system of practice which admits all that is truly efficacious in them, and much more besides?

The explanation is simple enough. That complete and effective system of medicine which you are to be taught here admits the curative power of states of atmosphere, food, water, mind, and also of articles of the materia medica, and its practice should consist of the use of both of these means. But some of the articles of the materia medica are capable of injuring the system, causing deranged action—disease. It must, therefore, very often be a nice and difficult question to determine, in instances of disease, whether they are to be given at all, or whether the cure should be left to adaptations of atmosphere, food, mind; also a nice and difficult question to determine

what medicines are to be given, and when, and how long to be continued.

These serious questions can only be safely determined by men of intelligent minds, well acquainted with anatomy, physiology, pathology, the causes of disease, materia medica, pharmacy, and therapeutics. And now I would ask you, do all who practise the profession of medicine possess these requisites? We know that there must be many exceptions. We know that the profession is followed by many who are deficient in intelligence, and in the moral sense of the responsibility which they incur; who have never truly realized to their minds the importance of these several branches of science, and who have, in consequence, never been adequately acquainted with them. And what must necessarily result from these facts? Why, that in the hands of many who *profess* this complete and effective system of medical practice, it must become the means of doing harm, either by directly causing derangement, or indirectly preventing recovery, by interfering with the natural curative power.

In this manner the profession is liable to become unpopular, and to have its usefulness called in question; nay, more, to have its injurious tendencies broadly asserted. Now the systems of hydropathy, homœopathy, and others are safe in a great measure from disadvantages of this kind. The hydropathist may recommend his rural walks on a mountain side, his plain nutritious diet, his pure water, and freedom from anxiety and care. The homœopathist may also regulate his patient's food, and excite hope and confidence by his inert globules. Both may act thus with the certainty of curing many diseases, and yet be very imperfectly acquainted with anatomy, physiology, and pathology. They are not so liable to cause direct injury. The harm they do is negative: they are preventive of many recoveries; they stand in the way of the application of means which are safe and effective, when used by intelligent and properly educated men.

These facts, then, will, I trust, have sufficiently explained to you how partial systems, as homœopathy and hydropathy, may acquire popularity, and how a complete system, including all that is truly useful in these partial systems, and much more besides,

may be received with distrust. And now we come to the practical question—Are we to prefer these partial systems of treatment, and give up our complete and more effective system, because the former may be practised with tolerable success by ignorant and uneducated men, whereas the latter cannot be exercised safely, or to advantage, unless by well educated, conscientious, and intelligent men? Surely there can be no hesitation in disposing of a question such as this? I have already told you that as the mind of man becomes developed, and amply stored with facts of knowledge, his actions—*i.e.* the application that he makes of this knowledge—must bear its impress, must be the evidence of its degree; and the arts which he practises must increase in power, in usefulness, and in extent. This is the course which the mind of man must follow in the march of improvement of the human race; and can it for a moment be supposed that the art of medicine—that art which is a necessity of all conditions of society—is to be the single exception to this universal law? Are we to say—Be satisfied to cure disease, and remove pain, by merely a partial application of that knowledge which is open to your minds to acquire, and do not avail yourselves of that great, and varied, and increasing knowledge which is also within your reach, and the right application of which is capable of extending the resources of the healing art—of bringing health to hundreds, who without it would continue to suffer and to die.

The least reflection will prove to you that this cannot be: the mind of man will *not* stand still. It would be as reasonable to tell the navigator that he must no longer traverse the seas with expedition and punctuality under the power of steam, but be satisfied again with the uncertain winds; or to the manufacturer of the beautiful fabrics of the present day, that he must discard his ingenious and complicated machinery, and go back to the hand-loom of an earlier state of the arts; or to the chemist that he must forget those precise and certain processes by which he is able to unravel the complex combinations of matter, and go back to the dreams and uncertain gropings of the alchemy of the middle ages. We cannot, then, accept these partial arts of healing for that more complete and expanding one which seeks to base itself on the fulness of knowledge, and which can

only be truly practised by intelligent and cultivated minds. But whilst we thus with confidence assert not only the superiority of the system of medicine as now taught in medical schools, but also, that no system which does not acknowledge the importance of the fulness and increase of knowledge is in accordance with the intelligence of the human mind, we must take care that the admitted power which this system possesses, in the hands of the ignorant, of doing harm, may, as far as practicable, be prevented. How is this to be achieved? By *efficient medical education, and adequate test examination.*

The safety and efficacy, then, of the profession of medicine, are altogether dependent on the capacity and qualifications of those by whom it is followed. I have already explained to you in what consists the best course of *collegiate* education, and have also noticed the importance of an adequate test of fitness by examination being applied; and I now pass to the concluding division of my subject, which is, whether, in order to the formation of an efficient profession of medicine, more than mere collegiate education is necessary or not? I have told you that more is required. We have now to state what this is, and then to inquire whether there is, as yet, any tendency to the development in India of this additional requisite to the existence of an efficient system of medicine. A very little reflection must satisfy any one who is at all acquainted with the nature of *medical science* and *practice*, that the system of collegiate education and test examination may be as perfect as they are susceptible of becoming, yet the medical profession can never be the best means of preventing and curing disease, unless a considerable proportion of its followers have the intelligence to be strongly impressed with the fact, that our knowledge of the animal system, and of the agencies that influence its actions—still imperfect—is being steadily and gradually augmented, and that the phenomena of disease and the action of remedies are so numerous and varied, and require for their perception and right appreciation so much patient attention, that no one, however great his ability and opportunities, can ever feel that he has sufficiently observed and studied them. There must, then, be this firm belief, and, moreover, the industry and perseverance to keep pace

steadily with the progressive advancement of the medical sciences, and by continued and attentive observation of disease, to quicken our perception and strengthen our reasoning powers, —*i.e.* to acquire what is usually termed *medical experience*. There can be no effective profession of medicine, no best means of curing disease, unless practitioners are actuated by principles such as these.

It is because a large proportion of medical men in Great Britain are actuated by these principles that the profession bears a high character, though the systems of medical education, more particularly their clinical departments, are very generally avowedly defective. Intelligent and conscientious men instruct themselves, and thus remedy the defects of collegiate training.

It is, on the other hand, because medical education is defective, but, above all, because a portion of medical men are wanting either in intelligence, in conscientiousness or industry, to keep pace with advancing science, and to acquire medical experience, that there is also in the medical profession, as existing in Great Britain, much to deplore, much bad practice, much wrong spirit.

We have seen reason to be satisfied that the Government system of medical education here is good. We know that several of the College graduates have entered upon the exercise of their profession ; that in Bengal a still greater number, upwards of a hundred graduates of the medical College of that Presidency are practising medicine : and the question very naturally arises, from a consideration of the line of argument in which I have been engaged, whether there is as yet any evidence that a fair proportion of the *Native* followers of the profession of medicine in India—the graduates of our Indian medical colleges—show that intelligence, conscientiousness, and industry, which lead to continued and sustained study, through an entire course of active professional life, and without which there cannot be, we assert, an effective and invariably useful profession of medicine. Attaching, then, so much importance to this condition of mind, and looking upon its manifestation as the only true evidence of success having attended the efforts of Government to introduce into this country a useful system of medical practice, I have been

very watchful for its indications, not only among the graduates of this College, but also to the extent of my opportunities on a late visit to Calcutta, among the graduates of the Bengal College; and I have no hesitation in saying, that I have not as yet observed any satisfactory evidence of this spirit in the graduates of our Indian colleges. There is, generally speaking, existing in their minds the conviction that with the close of the college curriculum there is completion of education. This is, indeed, the rock on which the Indian student generally wrecks his prospect of being really useful in the practical affairs of life.

In the civilized countries of Europe the training of schools and colleges is looked upon merely as the means of disciplining the mind, and preparing it for the active exercise of all its faculties, and its gradual development in the process of years into the fulness of maturity, strength, and usefulness. But this is not the view which the Indian youth takes of his position when he leaves his school or college. At that period, when in civilized Europe the real education of life is only about to begin, he conceives himself to be already perfect, enters upon projects for teaching his more ignorant countrymen, regenerating his country, and lays claim to the consideration and honors which in other countries are only aspired to by, and accorded to, the tried and ripe intelligence of manhood. This is to be deplored; for unless it be corrected—unless the fallacy be removed—there can be no real, steady, progressive advance in the civilization of India. Surely it can never be supposed that the people of this country are ever to attain to the character of statesmen, of men of science, or of literature, or to high place in the learned professions, by any other course than that which is found necessary in other countries? In Europe, the eminent in politics, in science, in literature, in arts, do not acquire their greatness on the benches of schools and colleges. The seed, it is true, may be sown there, and the soil prepared, but the growth and the fruit are the work of many after years of patient and persevering study and application. Had the genius of the people been of that kind which is satisfied with a little knowledge—which does not feel that the realms of inquiry into which the human mind may range are boundless—and which is not inspired to enter on the onward

course with high spirit and intent, where would now be the sciences, the literature, and arts of modern Europe? Slumbering, doubtless, in the darkness of the middle ages.

Is it reasonable, then, I would ask, that the people of India should hope to attain the distinction and consideration of the cultivated intellects of Europe, when they neglect the only means by which this high position can be gained? It is vain to ask for these things, and to point to school and college performances in justification of the pretension and the claim. The force and justness of the request cannot be acknowledged. Before it can even be entertained, there ought to be in the performances of the after life of the educated in our Indian colleges evidence that the development of intellect, which the active occupation and self-mental culture of maturer years can alone give, has been really reached. When we seek for this evidence, do we find it? For the last twenty years the British Government in India has been active in establishing and encouraging schools and colleges for the education of Native youths; and hundreds must have gone forth from these colleges who are now in the maturity of manhood. Can we, I would ask, point to a single name that has become favourably known in connection with science, literature, or art? I believe none that the most lenient critic would acknowledge.

And now I must bring these desultory remarks to a close. The moral to which they point is simply this. The endowment of schools and colleges serves an important and useful purpose; but the civilization of a great people, and the vast advantages that flow from it, must always mainly depend on the intelligence, the energy, and moral worth of the people themselves. In pursuing this argument, I have spoken plainly; for I am not aware of any reason why I should hesitate to tell you what I believe to be true. At all events, I know that a first step towards improvement is the knowledge of our defects.

In the reprint of "An Account of the System of Clinical Instruction and Examination followed in the Grant Medical College at Bombay" lately distributed by me, through an oversight of the printer the return of cases treated in the Medical and Surgical Clinical Wards, during a student's curriculum of clinical instruction, was omitted. The return in question is now appended to this Lecture, for the information of those into whose hands both publications may fall.

C. M.

Bombay, July 1853.

Return of the Sick treated in the Clinical Medical Ward of the Jamsetjee Jejeebhoy Hospital, in Sessions 1848-49, 1849-50, *and* 1850-51.

Names of Diseases.			Number Admitted.	Number discharged.	Died.	Total.	Remarks.
Fevers.	Ephemeral		5	5	..		
	Intermittent	Quotidian	60	60	..		
		Tertian	6	6	..		
		With Cerebral Symptoms	2	2	..		
		,, ,, ,, and slight Pneumonia	1	1	..		
		,, Pneumonia	4	4	..		
		,, Bronchitis	3	3	..		
		,, Asthma (Emphysema)	1	1	..		
		,, Enlarged Spleen	47	47	..		
		,, Gastric Symptoms	1	1	..		
		,, Jaundice	1	1	..		
		,, Acute Dysentery	1	1	..		
						132	

Names of Diseases.			Number Admitted.	Number discharged.	Died.	Total.	Remarks.
Fevers (contd)...	Remittent.....	Simple.....	20	20	..		
		With Head Symptoms.....	10	8	2		
		,, Pneumonia	14	10	4		
		,, Bronchitis	12	12	..		
		,, Pneumonia and Bronchitis.....	1	..	1		
		,, Pneumonia and Jaundice	1	1	..		
		,, Enlarged Spleen, and Secondary Dysentery.....	1	..	1		
		,, Dysentery.....	2	..	2		
		,, Hepatitis	1	1	..		
		,, Hepatitis & Phthisis Pulmonalis.	1	1	..		
		,, Hepatitis and Pneumonia	1	1	..		
		,, Hepatitis and Enlarged Spleen ..	1	1	..		
		,, Jaundice	18	11	7		
		,, Enlarged Spleen	3	2	1		
		,, Gastric Symptoms	1	1	..		
		,, Rheumatism	1	1	..		
		,, Bronchitis and Diarrhœa	1	1	..		
		,, Anæmic Cardiac Murmur	1	1	..		
						90	
	Eruptive	Variola	8	3	5		
		Rubeola	1	1	..		
						9	

Abdominal Diseases	Peritonitis	3	2	1	
	Hepatitis	20	20	..	
	Hepatic Abscess	17	4	13	
	Hepatic Abscess and Pleuritic Effusion.	1	..	1	
	Jaundice	5	5	..	
	,, and Dysentery	1	..	1	
	Dysentery	55	41	14	
	Diarrhœa	7	6	1	
	Dysentery, and Phthisis Pulmonalis	1	1	..	
	Dyspepsia	1	1	..	
	Gastro-Enteritis	1	..	1	
	Colic	1	1	..	
	Ascites from Enlarged Liver	1	..	1	
	,, ,, ,, Spleen	1	1	..	
	Bright's Disease of the Kidney	25	17	8	
	C. Dysentery	1	1	..	
	,, Pericarditis	2	2	..	
	,, Endocarditis	1	1	..	
	,, Secondary Syphilis	1	1	..	
	Diabetes	1	1	..	
	Cystitis	1	1	..	
	Ulcerated Sore Throat	2	2	..	
					149
Thoracic Diseases	Laryngitis, Chronic	2	1	1	
	Pneumonia	57	35	22	
	Pleuritis	9	5	4	
	Pleurodynia	1	1	..	
	Bronchitis	15	14	1	
	Phthisis Pulmonalis	40	14	26	
	Hœmoptysis	4	3	1	
	Phthisis Pulmonalis, with subsequent Pericarditis	1	1	..	

Names of Diseases.		Number Admitted.	Number discharged.	Died.	Total.	Remarks.
Thoracic Diseases (continued)	Asthma (and Emphysema)	9	8	1		
	Pericarditis	9	8	1		
	Endocarditis	3	3	..		
	Disease of Heart (Valves)	12	5	7		
	,, ,, C. Pneumonia	1	..	1		
	,, ,, General Peritonitis	1	..	1		
	,, ,, Rheumatism	1	1	..		
	Disease of Aorta (Aneurism)	2	..	2		
					167	
Diseases of the Nervous System	Meningitis	1	1	..		
	Delirium Tremens	3	3	..		
	Cerebral Disease	2	2	..		
	Apoplexy	1	..	1		
	Hemicrania and Cephalalgia	3	3	..		
	Hemiplegia	22	15	7		
	Paraplegia	2	2	..		
	Facial Palsy	2	2	..		
	Epilepsy	1	1	..		
	Chorea	1	..	1		
	Tetanus (Idiopathic)	1	..	1		
	,, (Traumatic)	2	2	..		
	Hydrophobia	1	..	1		
	Otitis	1	1	..		
					43	

Other Diseases	General Dropsy (Leprosy)	1	1	..	
	Rheumatism	17	17	..	
	Syphilis (Primary)	1	1	..	
	,, (Secondary).....	9	9	..	
	Cachexia.....	3	2	1	
	Scorbutus	1	1	..	
					32
	Total...	622	478	144	622

Return of Diseases and Injuries treated in the Surgical Clinical Ward of the Jamsetjee Jejeebhoy Hospital, in Sessions 1848-49, 1849-50, *and* 1850-51.

Names of Diseases.		Number admitted.	Number discharged.	Died.	Remarks.
Abscess	Acute	23	22	1	
	Chronic	11	11	..	
Aneurism of Carotid Artery		1	..	1	
Burns and Scalds		3	3	..	
Contusions		2	2	..	
Condylomata		3	3	..	
Cancrum Oris		1	..	1	
Carbuncle		1	1	..	
Cataract		1	1	..	
Diseases of Bones	Caries	8	6	2	
	Necrosis	3	3	..	
Diseases of Urinary Organs	Calculus Vesicæ	9	8	1	
	,, Urethræ	2	2	..	
	Retention of Urine	5	4	1	
	Stricture of Urethra	13	13	..	

Dislocations ..	Simple	Shoulder	2	2	..
		Clavicle	1	1	..
		Jaw	1	1	..
		Hip	2	2	..
		Ankle	1	1	..
		Fingers and Toes	5	4	1
	Compound	Ankle	1	1	..
Dracunculus ..	....	....	6	6	..
Erysipelas	....	....	6	5	1
Extravasation of Urine ..	....	....	1	1	..
Fractures	Simple	Skull	6	..	6
		Nose	1	1	..
		Clavicle	6	6	..
		Arm	6	6	..
		Fore-arm	9	9	..
		Olecranon	1	1	..
		Radius	2	2	..
		Ulna	2	2	..
		Fingers	2	2	..
		Ribs	3	3	..
		Thigh	14	14	..
		Leg	19	19	..
		Patella	2	2	..
	Compound	Arm	1	1	..
		Fore-arm	3	1	2
		Fingers	5	5	..
		Metacarpus	1	1	..
		Carpus	1	1	..
		Thigh	1	1	..
		Legs	16	11	5
		Toes	5	5	..
		Skull	1	1	..
		Jaw	1	..	1

Names of Diseases.		Number admitted.	Number discharged.	Died.	Remarks.
Fractures, comminuted	Fore-arm	1	..	1	
	Leg	2	..	2	
	Os Calcis	1	..	1	
	Patella	1	..	1	
Fistula in Ano		4	4	..	
Fungous Growth of Testicle		2	2	..	
Gangrena Senilis		1	1	..	
Gangrene of Fore-arm		1	..	1	
„ „ Arm		3	1	2	
„ „ Scrotum		3	3	..	
Hernia		3	3	..	
„ Strangulated Inguinal		4	1	3	
Hœmorrhoids		7	6	1	
Hydrocele		7	7	..	
Hydrophobia		2	..	2	
Injuries of Head and Spine	Concussion of Brain	2	2	..	
	Fracture of Base of Skull	1	..	1	
	Concussion of Spine	1	..	1	
Injury of Urethra		1	1	..	
Malignant disease of Testicle		1	..	1	
Prolapsus Ani		1	1	..	
Paronychia		2	2	..	
Penetrating Wound of Abdomen		1	1	..	
„ „ Chest		1	1	..	
Polypus Nasi		1	..	1	

Rupture of Liver and Kidney	1	..	1
Scrofula	3	3	..
Scirrhus of Glands of Neck	2	2	..
Sprain—Subluxation of Ankle....	3	3	..
Syphilitic Diseases..... Primary	25	25	..
Syphilitic Diseases..... Secondary	23	22	1
Syphilitic Diseases..... Gonorrhœa	9	9	..
Syphilitic Diseases..... Syphilitic Iritis	3	3	..
Tetanus	9	4	5
Tubercular Leprosy	1	1	..
Tumours..... Encysted	6	6	..
Tumours..... Of Hand (Fatty)	1	1	..
Tumours..... Of Jaw (Fibrous)	1	1	..
Tumours..... ,, ,, (Fibro Cartilaginous)	1	1	..
Ulcers..... Indolent	4	4	..
Ulcers..... Irritable	7	7	..
Ulcers..... Scorbutic	27	25	2
Ulcers..... Sloughing	7	7	..
Ulcers..... Weak	6	6	..
Ulcers..... Phagedœnic	1	1	..
Wounds..... Contused and Lacerated	88	82	6
Wounds..... Incised	3	2	1
Wounds..... Punctured	3	3	..
Total....	508	451	57

Table of Capital and Minor Operations performed in the presence of, and by the Students, during Sessions 1848-49,* 1849-50, *and* 1850-51.

Lateral Operation of Lithotomy	9
Strangulated Inguinal Hernia	4
Removal of greater part of Upper Jaw	1
,, ,, Fibro-Cartilaginous Tumour from Abdomen	1
Amputation of Fore-arm	7
,, ,, Leg	12
,, ,, Thigh	6
,, ,, Fingers and Toes	25
Cutting for Fistula in Ano	3
,, through adhesions between Tongue and Cheek	1
,, into Urethra for removal of Calculus	1
,, into Perineum for Extravasation of Urine	4
Dividing Prepuce and dissecting it from Glans	1
,, Tendo Achillis	2
Removing Epulis	3
,, Hypertrophied growth from Ear	1
,, Calculi from Urethra	8
,, Œdematous Prepuee	1
,, Tumours	13
,, Hœmorrhoids	23
,, Polypus from Ear	3
,, ,, ,, Nose	17
,, ,, ,, Pharynx	2
,, Foreign bodies from Nose	15
,, Fibro-Cartilaginous Tumour from Finger	1
,, Warty Excrescences	34
Slicing off Fungous Growth	1
Slitting up Prepuee	6
Circumcision	24
Operation for Entropium	3
Paracentesis Abdominis	10
Passing Catheters and Sounds	313
Tapping for Hydrocele	265
Puncturing Ganglia	10
,, Bladder above the Pubis	2
Opening Abscesses	760

* The number of minor operations for this Session have not been recorded ; those for 1851-52 have therefore been substituted.

Reducing Dislocation of Jaw	4
,, ,, Hip	2
,, ,, Shoulder	2
,, ,, Ankle	1
,, Strangulated Hernia	2
Applying Issues, Setons, and Sutures.	94
Bleeding	129
Cupping	214
Lancing Gums	17
Extracting Teeth	384

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